

**PRELIMINARY REPORT - STEVEN P. VIANI, P.E.**

*In Re: W.R. GRACE & Co., United States Bankruptcy Court for the District of Delaware,  
Chapter 11, Case No. 01-01139 (JFK)*

Assignment

San Diego Gas & Electric, Sempra Energy and Enova ("Claimants"), through their attorneys, have retained my services to provide them with analysis and expert services to assist them in determining the manufacturer of the fireproofing material used at the 101 Ash Building, San Diego, CA 92101, ("HQ Building") and determine the condition of the fireproofing material located therein.

This report sets forth my Professional Background and Experience, Testimony Experience, the Material Subject to be Reviewed, my Summary of Findings and Opinions in respect to my assignment in the above-referenced matter.

Professional Background and Experience, Testimony Experience, and Compensation

In addition to the information presented in my C.V. (Attached at "A") and incorporated by reference, I received training as an AHERA (Asbestos Hazard and Emergency Response Act) assessor and management planner. Over the past 27 years, I have come to recognize materials and locations suspected to contain asbestos, construction practices, abatement and abatement design.

Over the past 10 years, the only article that was published was a case history in Foundation Magazine concerning drilling piers for a bridge for Placer County. However, over the past 23 years, I have presented papers at technical conferences, some of which might have been published.

I have provided qualified expert testimony regarding construction practices, hazardous waste management, naturally occurring asbestos, geotechnical and civil engineering. Specifically, I have provided the following expert testimony at the following depositions or trials over the past 10 years:

1. Duran v. Rest (Deposition)
2. US rents v. Shimada (Deposition)
3. Rickley/Roit v. Goodfriend (Deposition and trial testimony)
4. SMUD v. Fru-Con (Deposition)

My compensation for this review is based on the hourly rate of \$250.00 per hour portal to portal, and \$375.00 for actual deposition, arbitration and court testimony.

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### Material Subject to Review and Site Inspection

The files concerning the building's asbestos history over the past 14 years were reviewed. This information consisted of assessments, test results, abatement contractor information, contracts and internal memoranda concerning the abatement approach. The test result data covered initial assessment data (Attached at "B") for the fireproofing using polarized light microscopy (PLM) as well as clearance testing using transmission electron microscopy (TEM). The contract files for the various abatement contractors contained contracts and change orders for the work. Also reviewed were the waste disposal manifests for several of the contracts which indicate that the material being removed and disposed contains asbestos.

A brief inspection was conducted on January 16, 2007 of two floors, 12 and 13, to qualitatively determine the condition of the fireproofing on the structural steel and metal decking. Additional abatement activities are scheduled to coincide with future remodeling activities.

### Summary of Findings

A review of the available information concerning only the fireproofing for the structural steel and metal decking was made using the information contained in the file. The file contained an excerpt of the original project specifications developed by Richard George Wheeler AIA dated 1 August 1966 for the San Diego Gas & Electric Company Office Building at 101 Ash Street in San Diego, California (Attached at "C"). Sections 9 of the specifications provide the requirements for the spray-on fireproofing to be used on structural steel framing and metal decking. In Section 3.a the specifications list "Mono-Kote", as manufactured by Zonolite, as approved and the thicknesses of the fireproofing shown on the drawings was based on using Mono-Kote. Further, under the application section, Section 6.a, Mono-Kote is designated as needing to be added after the water is added to the mixer. It is clear that the architect intended that Mono-Kote would be the product used to fireproof the structural steel and decking on this project.

A review of the change order log (Attached at "D") prepared for the project was reviewed to determine if any substitutions for another structural steel or metal decking fireproofing product had been made. The change order log for construction did not indicate that M.H. Golden Construction Company (MHGCC) requested a deviation from the specified material, Mono-Kote.

Several asbestos abatement projects were performed on the building's structural steel and metal decking over the past 13 years in connection with various tenant improvements. An early abatement project was performed to remove asbestos to allow for modernization. Subsequent abatement contracts have been performed to support renovation and remodeling activities.

A physical inspection of the fireproofing material was conducted on floors 12 and 14 of the HQ Building. The fireproofing was intact, not damaged and not sagging. In certain

areas, the fireproofing had been abated to allow for the installation of hangers or supports. Additional abatement is scheduled for areas expected to be remodeled.

The area above the suspended ceiling below the exposed metal deck and structural steel, coated with Mono-Kote, is used as a plenum for the HVAC system. Testing beginning in 1993 showed no airborne fibers even after abatement. It appears that the Mono-Kote fireproofing is intact and not releasing asbestos fibers into the air. Overall, the condition of the Mono-Kote fireproofing is good.

#### Opinions

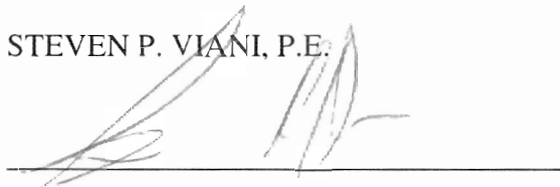
After a review of the file and personal observation of the condition of the fireproofing material on the 12 and 13 floors, coupled with my experience, training and knowledge, I have reached the following conclusions and opinions:

- (1) the material used at the HQ building to provide fireproofing material is consistent with the building specifications calling out Mono-Kote as the fireproofing material to be used in the construction. There is no change order reflected in the documentation that indicates that Mono-Kote was not used or replaced with another fireproofing material. Therefore, it is my opinion that the fireproofing material used at the HQ building is Mono-Kote manufactured by Zonolite.
- (2) Based on my observations of the fireproofing material as set forth above, the condition of the fireproofing material is stable and not deteriorating on its own, and, subject to abatement for work that appears to have been performed due to tenant improvements, the fireproofing material is undisturbed.

#### Reservation

I reserve the right to modify these conclusions based on additional documentation, and/or based on result of any further inspection and or laboratory testing.

STEVEN P. VIANI, P.E.



1/17/07  
Date

## **EXHIBIT “A”**



Technical, Engineering, Construction, Medical & Scientific Experts

3452 East Foothill Blvd., Suite 1160, Pasadena, CA 91107-3160  
626/795-5000 TEL 626/795-1950 FAX  
800/555-5422 (Toll Free)  
e-mail: [experts@ForensicsGroup.com](mailto:experts@ForensicsGroup.com)  
<http://www.ForensicsGroup.com>

**STEVEN P. VIANI, P.E.**

**Education and Specialized Training**

BS Civil Engineering, California State University, Sacramento

Graduate courses in Geotechnical Engineering

Continuing education classes in claims avoidance, negotiations and project management

OSHA 40 hour training

USACOE Construction Quality Management Certification

**Professional Registrations**

Registered Civil Engineer in California

Licensed contractor in California (RMO)

**Employment History**

State Water Resources Control Board (2-year assignment with (1977-1982)

Army Corps of Engineers)-Senior Engineer

Kellogg Corporation-Senior Engineer (1982-1983)

Department of Health Services-Senior Engineer (1984-1987)

Roy F. Weston, Inc.-Project Director (1987-1990)

Canonie Environmental Services, Inc.-Western Regional Manager (1990-1994)

Geo Con Inc.-Western Regional Manager (1994-1998)

Layne-Christensen Co.-Western Regional Manager (1998-1999)

BCN Company-Vice President of Operations (1999-2001)

Donald B. Murphy Contractors Inc.-Regional Manager (2001-2003)

Private Consulting (Present)

**Representative Experience**

Over the past 28 years, have held senior level positions in construction, consulting and governmental entities. Have managed, directed or performed projects ranging from \$3000 Phase 1 Preliminary Site Assessments as a consultant to \$20 Million site remediations, including many large and significant environmental and geotechnical construction projects as a contractor. Have 15 plus years experience in managing business units or departments with total P+L responsibility and staff management up to 35 people.

**Legal, Claims and Defect Oriented Experience**

§ Provided expert input for case involving a 14 unit subdivision in Sacramento County regarding design adequacy and project management. Problems involved, project management, design of on-site and offsite improvements and survey issues.

§ Preparation of impact analysis, acceleration, differing site condition, defective/deficient contract document, directed change, and constructive change design/build slope stabilization subdivision project in Los Gatos, California.

§ Successfully negotiated a \$ 6 million termination for convenience claim for a Superfund site. Developed an estimate of contractor costs and negotiated a fair and reasonable settlement while representing a state government entity. Project required negotiation of an acceleration claim for previous contractor, expert testimony at various court proceedings and presentations to media and elected officials.

§ Provided expert input for construction of 3.3 mile sewer line through rural property to support development. Services included program management review, design adequacy and inspection procedures.

§ Provided expert testimony for a case involving geotechnical, slope stability and waste disposal issues in a development in Malibu. Problem associated with illegal disposal of hazardous materials and the impacts on the surrounding houses including foundation stability and health impacts.

§ Developed detailed problem analysis and expert testimony for design and construction of foundation and earthwork issues associated with parking garage in San Francisco. Involved with Mechanic's Lien.

§ Investigated defective construction involving stucco, roofing, concrete and mechanical issues associated with office/warehouse project in Fresno.

§ Prepared and negotiated a changed site conditions, acceleration, directed change, constructive change and defective and deficient contract document change order with the US Army Corps of Engineers for a slurry wall project.

§ Developed and negotiated a changed condition change order for a bridge designed and owned by the US Forest Service.

§ Developed and negotiated large change orders for quantity increases and changes for design/build environmental remediation projects.

§ Developed claim document for high rise hotel in downtown Los Angeles involving directed changes, constructive changes, defective and deficient contract documents, acceleration and significant contractual issues.

### **Remediation and Environmental Experience**

§ As part of a construction claim on a 4-story parking structure at San Francisco International Airport, evaluated an earthwork claim concerning the presence of hazardous waste, rock, trash and unsuitable materials and their effect on the project schedule. Further analysis of environmental requirements on illegal filling of wetlands in San Francisco Bay.

§ Completed the remediation of the Capri Pumping Services site in East Los Angeles, CA. Site was contaminated with lead, copper, cadmium, solvents and petroleum hydrocarbons. Remediation of this State Superfund site included preparation of a health risk assessment for lead exposure to the surrounding community.

§ Developed a Remedial Investigation /Feasibility Study for the Purity Oil Sales Superfund site in Malaga, CA. Site was former oil processor that had filled onsite ponds with construction debris containing lead and asbestos that impacted soil, surface water and groundwater. RI/FS included on-site and off-site investigation, surface water sampling, development of remedial objectives and interim remedial measures. Extensive US EPA involvement, public involvement and local government oversight.

§ Oversaw the remediation of the Jibboom Superfund Site in Sacramento, CA. Site was a former scrap yard that had impacted the area with lead, PCB, and hydrocarbons. Extensive air monitoring of the perimeter was performed to limit migration of contaminants.

§ Site manager for the McColl Superfund site in Fullerton, CA. Involvement included site sampling of surface and subsurface runoff, construction of site facilities and management of remedial contractors.

§ Project manager for the Kyocera facility in Sorrento Valley, CA. Project involved leaking solvent tank that impacted groundwater and adjacent wetlands and ponds. Project included onsite and off-site investigation, development of remedial alternatives, permitting and monitoring.

§ Remediated a PCP impacted groundwater plume using funnel-gate technology at a wood treating facility. Project involved innovative concept using activated carbon in a passive treatment system.

§ Constructed a soil-bentonite slurry cutoff wall in Arizona to prevent subsurface water contaminated with copper from migrating into adjacent marshes and river.

§ Investigating impact of defective earthwork project on adjacent dwellings in subdivision, including, loss of use, mold, settlement and movement. Project involved extensive grading by others, which altered surface and subsurface water flow regimes that impacted subdivision.

§ Designed and remediated 2500 CY TCA impacted soil inside an existing manufacturing structure in Southern California.

§ Designed, permitted and remediated 70,000 CY of TPH impacted soil removal for the closure of the Lockheed C plant in Burbank, California. Closure granted.

§ Remediated several UST's in Oakland, California by using in-place abandonment.

§ Oversaw the design and construction of a groundwater treatment facility for pesticide contaminated soils in Fresno, California as well as excavation of 10,000 CY of pesticide impacted soils.

§ Remediated a TCE/TCA impacted groundwater plume using a Deep Soil Mix (DSM) wall that was 65 feet deep and had a surface area of 50,000 SF at an active railyard.

§ Remediated soil impacted with solvents using vapor extraction at the Xerox site in Santa Ana, California. Project included permitting, monitoring and maintenance.

§ Constructed a gasoline extraction trench using biopolymer slurry and an HDPE membrane at the port of Los Angeles.

§ Constructed a composite HDPE (Gundwall) wall inside of a soil-bentonite slurry cutoff to contain a plume of pregnant leachate from a copper heap leach facility and prevent the plume from reaching the river.

§ Developed environmental analysis for portion of former Superfund site that would be removed from Superfund designation to assess impacts on new owners of that piece of property.

### **Consulting Oriented Experience**

§ Designed and oversaw abatement of numerous asbestos abatement projects throughout California.

§ Planned and permitted high tech chemical storage and fabrication facilities in West Germany, Korea and Taiwan.

§ Developed large scale Phase I property transfer program for major renovation of prime San Francisco real estate.

§ Developed data base management system for US Department of Energy facility to manage chemical release monitoring data for site impacted with chemical and radioactive wastes.

§ Performed numerous Phase I Preliminary Site Assessments, Remedial Investigations, Feasibility Studies and Corrective Measures Studies.

§ Developed expertise in waste treatment and remedial waste treatment technologies for soil and water.

### **Construction Oriented Experience**

§ Constructed ADA upgrade and remodel for US Coast Guard Pacific Strike Force Facility in Novato.

§ Managed the construction of a remodel of mall space for the US Army Corps of Engineers to provide a recruiting center.

§ Managed lead abatement, asbestos abatement, structural repairs and painting for 1400 military housing units at Beale Air Force base.



§ Designed and built a foundation seismic upgrade using micropiles for a public library in Alameda.

§ Designed and built a soil nail temporary excavation support system for the Bascon Engineering Building for UC Santa Cruz.

§ Designed and managed asbestos abatement activities for 500,000 square feet of office space for TRW buildings in El Segundo.

§ Constructed projects using ground anchors, tiebacks, jet grouting, soil mixing, shotcrete, micropiles, driven piles and sheet piles, often under design/build contracts.

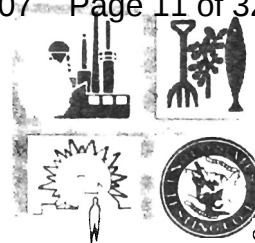
§ Constructed soil nail, soldier pile and wood lagged excavation support projects for building excavations and soil removal projects.

§ Oversaw construction of large wastewater treatment plants, pump stations, tunnels and box sewers for Federal Government construction program.

§ Performed ground improvement projects involving dynamic compaction and vibro compaction/replacement.

INFORMATION CONTAINED HEREIN REGARDING THE EXPERT WAS PROVIDED BY THE EXPERT TO FORENSISGROUP, INC. FORENSISGROUP, INC. DOES NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE EXPERT ON HIS RESUME OR FOR ANY CHANGES IN THE EXPERT INFORMATION THAT MAY OCCUR AFTER RECEIPT OF THIS RESUME. IT IS THE CLIENT'S RESPONSIBILITY TO QUALIFY THE EXPERT AND TO VERIFY THE ACCURACY OF ALL INFORMATION CONTAINED HEREIN.

## **EXHIBIT “B”**



bulk sampling &  
analysis  
air sampling &  
analysis  
code compliance  
studies  
consultation

## United States Testing Company, Inc.

### Western Region

3467 KURTZ STREET, SAN DIEGO, CA 92110 (619) 222-0544

May 24, 1989

Mr. Harlan Tande  
WHEELER, WIMER, BLACKMAN & ASSOCIATES  
3276 Rosecrans Avenue  
San Diego, CA 92110

Project: San Diego Gas & Electric Building  
101 Ash Street, San Diego, CA

Subject: Report on Asbestos Investigation

Mr. Tande:

At your request, United States Testing Company, Environmental Services Division, performed an investigation to identify possible asbestos-containing materials present in the Electric Building, San Diego, California.

Bulk material samples were taken of both friable (easily crumbled by hand pressure) and non-friable materials. Samples were collected of materials which are present throughout the building and homogeneous in color, texture and appearance. Materials were not sampled on each floor due to the determination of homogeneity and the assumption that each material type was identical. The exception is the spray applied acoustical ceiling material on the 12th and 13th floors and Street Level, new Customer Service. These areas have undergone previous renovation, and with knowledge obtained from the building engineer, who accompanied our investigators, it was determined that sampling was necessary to determine content of this material.

Thermal System Insulation (T.S.I.) on mechanical system fittings was assumed to be asbestos-containing. T.S.I. fittings which were in good condition were not sampled. However, in locations where previous damage was evident, samples were collected.

Access to mechanical systems, corridors, elevator shafts and offices was provided to perform this investigation.

Description of analysis table:

### Sample Number

EB - 1902

Electric Building - 19th Floor-Second Sample Location

### Sample Location

Approximate location (actual location noted on floor plan drawings)

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Material Sampled

Type of material sampled

% Asbestos

Percentage by weight and asbestos type

Friable/Non-friable

F / NF

Sample analysis of bulk materials was performed in accordance with procedures described in the Appendix A, "Interim Method for the Determination of Asbestiform Minerals in Bulk Insulation Samples", Sections 1 and 2, published in the Federal Register, Volume 47, No. 103, May 27, 1982. This procedure involves examination of the samples with a petrographic microscope using Polarized Light Microscopy (PLM).

**BULK SAMPLE ANALYSIS**

<u>Sample Number</u>	<u>Sample Location</u>	<u>Material Sampled</u>	<u>% Asbestos</u>	<u>F/NF</u>
EB-2101	Emergency Generator Room	Fireproofing Patch	ND*	
EB-2102	Air Handler Room	Return air duct insulation	ND	
EB-2001	Chiller Water Supply	Mudded Elbow	10% Chrysotile 5% Amosite	F
EB-2002	Pump #8	Valve insulation	65% Chrysotile	F
EB-2003	Carrier Unit	Mudded Elbow	10% Chrysotile 10% Amosite	F
EB-1901	19th Fl Hallway	Acoustic ceiling	10% Chrysotile	F
EB-1902	Plenum above Women's Room	Fireproofing	20% Chrysotile	F
EB-1903	Plenum above Women's Room	Duct tape	ND	
EB-1904	Receptionist Area Lightwell	Acoustic	25% Chrysotile	F
EB-1905	Elevator lobby	Acoustic	20% Chrysotile	F
EB-1906	Electric Equipment Room	Fireproofing	25% Chrysotile	F

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EB-1801	Receptionist Area	Acoustic	15% Chrysotile	F
EB-1802	Elevator lobby	Acoustic	15% Chrysotile	F
EB-1803	Women's Lounge	Acoustic	20% Chrysotile	F
EB-1701	Office West side	Ceiling panel	ND	
EB-1702	Return Air Plenum	Fireproofing	20% Chrysotile	F
EB-1703	West perimeter	Acoustic	15% Chrysotile	F
EB-1704	Northwest corner	Fireproofing	20% Chrysotile	F
EB-1501	Southwest perimeter	Acoustic	20% Chrysotile	F
EB-1502	Southwest corner spandrel beam	Fireproofing	15% Chrysotile	F
EB-1503	Janitor Closet	Mudded elbow	5% Chrysotile	F
EB-1201	Deck	Fireproofing	15% Chrysotile	F
EB-1202	Corridor	Acoustic	ND	
EB-1203	Entry Hallway	Acoustic	ND	
EB-1204	Elevator lobby	Acoustic	5% Chrysotile	F
EB-301	Cafeteria	Acoustic	20% Chrysotile	F
EB-201	West Perimeter	Acoustic	15% Chrysotile	F
EB-202	Telephone Room	Acoustic	20% Chrysotile	F
EB-203	Bursting Room	Acoustic Board	ND	
EB-204	East side office	Acoustic	30% Chrysotile	F
EB-101	Auditorium	Acoustic	30% Chrysotile	F
EB-102	Demo Stage	Sheet Vinyl (backing)	35% Chrysotile	NF
EB-103	Main Lobby	Acoustic	15% Chrysotile	F
EB-104	Main Lobby	Acoustic	25% Chrysotile	F
EB-SL1	New Customer Service	Acoustic	Trace** Chrysotile	F
EB-SL2	Corridor Outside New Customer Service	Acoustic	20% Chrysotile	F
EB-FT	Typical Floor Tile	Floor Tile	ND	

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\*ND = None Detected

\*\*Trace = less than 1% asbestos by weight

**OBSERVATIONS**

The Electric Building is a steel framed structure with concrete decks, twenty-one (21) floors above ground and two floors of subterranean parking. The first floor is approximately 38,300 square feet (sq. ft.), the second floor is approximately 36,200 sq. ft. with floors 3 through 21 being approximately 12,600 sq. ft. each. The two levels of parking are approximately 58,000 sq. ft. each. Total floor square footage, excluding the parking levels, is approximately 313,900 square feet.

The area above the drop ceiling system is used as a return air plenum throughout the building. This area has exposed asbestos-containing fireproofing present on all steel structural members (beams, columns) and concrete deck. The condition of the fireproofing is good, at this time. However, small amounts of debris were observed in several locations on top of the ceiling panels. Apparently, this debris was generated by the installation of hangers after original construction. Potential for exposure to asbestos fibers from this material is slight, unless the material is disturbed. Care should be taken when removing ceiling tiles and working above the drop ceiling so as not to disturb the asbestos-containing material.

Asbestos-containing spray applied acoustic ceiling material was identified in areas throughout the building. With the exception of renovated corridors on the 12th and 13th floors, all acoustic material should be assumed to contain asbestos fibers.

Damage was observed on the acoustic material around the interior perimeters where abrasion has occurred from the drapes moving across this material. Several locations in the corridors at the air registers have areas of erosion due to the air movement in these locations.

Damages in the aforementioned areas have occurred over the life of the building. Potential for exposure to airborne asbestos fibers is minimal, at this time, unless the material is disturbed or continues to deteriorate. The acoustic material is friable and consideration should be given to some form of remediation.

Asbestos-containing Thermal System Insulation (T.S.I.) is present on all piping systems observed. This material was found to be present on the elbows and fittings of the piping systems. Where damage has occurred the material is extremely friable and presents a high potential for fiber release. Areas which are in good repair are essentially non-friable unless the outer jacket has been breeched or damaged.

**RECOMMENDATIONS**

Consideration should be given to the repair or removal of the damaged acoustic ceiling material. The majority of damage was observed on the interior perimeter acoustic. Other areas of damaged acoustic are in the corridors around the air supply registers.

If planned access above the ceiling panels is to occur, personnel should be aware that asbestos-containing debris exists. Generally, engineering or maintenance personnel perform these operations. An Operations & Maintenance (O&M) Program should be considered to train and equip these persons in the proper methods of handling asbestos-containing materials.

## PAGE 5 - ELECTRIC BUILDING

If planned renovation or construction activities occur which may disturb the asbestos-containing materials in this building, the materials must be removed prior to these activities. A qualified, licensed asbestos abatement contractor must be used for the removal of asbestos-containing materials.

**ASBESTOS REMOVAL COST ESTIMATES**

The following cost estimates have been based on current industry pricing schedules. These costs are estimates and should be used for budgetary purposes only.

**FIREPROOFING**

<u>Floors</u>	<u>Total Floor Area</u>	<u>Removal Cost</u>	<u>Replacement Cost</u>	<u>Total Cost</u>
1 thru 19	288,700 sq. ft	\$4,619,200	\$866,100	\$5,485,300

**CEILING ACOUSTIC**

<u>Floors</u>	<u>Total Floor Area</u>	<u>Removal Cost</u>	<u>Replacement Cost</u>	<u>Total Cost</u>
1 thru 19	135,500 sq. ft.	\$542,000	\$271,000	\$813,000

These estimates do not include the cost for interior demolition of non-asbestos containing materials below the ceilings, new tenant improvements, vacating and reoccupying spaces, or asbestos project management and air sampling.

**SCHEDULING**

If, in the future, planned removal operations are to occur, a sufficient amount of time should be budgeted to safely and successfully complete the project.

To accomplish the interior ceiling demolition, remove and replace the asbestos-containing fireproofing, 30 to 40 days should be allotted per floor. If multiple floors can be taken out of service to accommodate removal operations, a significant reduction in time to complete the entire building will be realized.

Without a multiple floor removal operation, total estimated time for completion should be 570 days.

**PHOTOGRAPHS**

Photographs were taken to show areas where asbestos and non-asbestos containing materials are present throughout the building.

Asbestos-containing materials are identified with the attached "Red" arrows. Materials which were sampled as suspect materials and found to be non-asbestos containing, are identified with "Green" arrows.

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United States Testing Company appreciates the opportunity to provide these services.

Respectfully,

UNITED STATES TESTING COMPANY

A handwritten signature in dark ink, appearing to read "Larry Lindeen", is written over the company name.

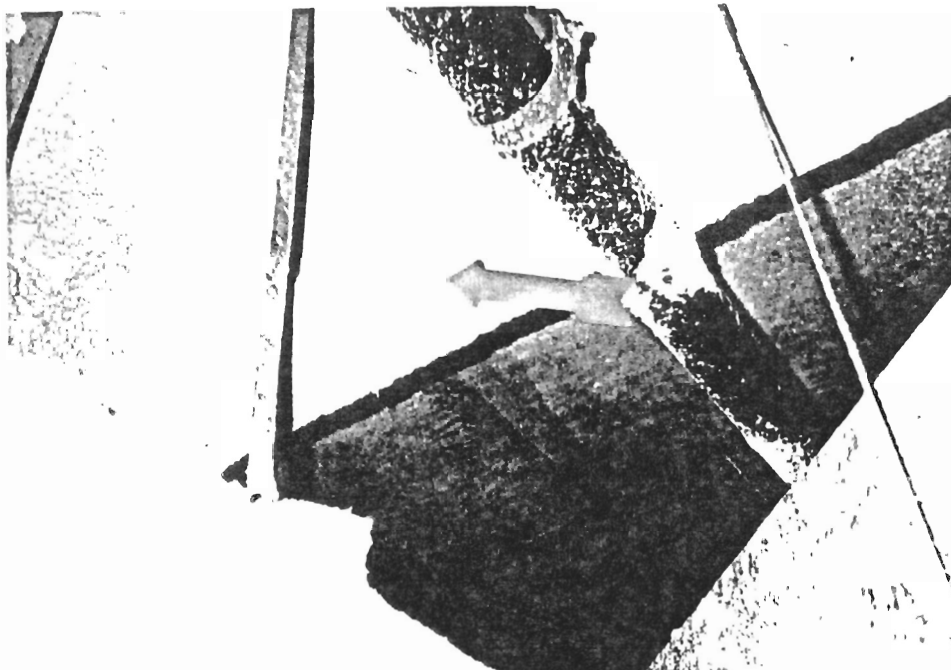
Larry Lindeen, Vice President  
Environmental Services Division

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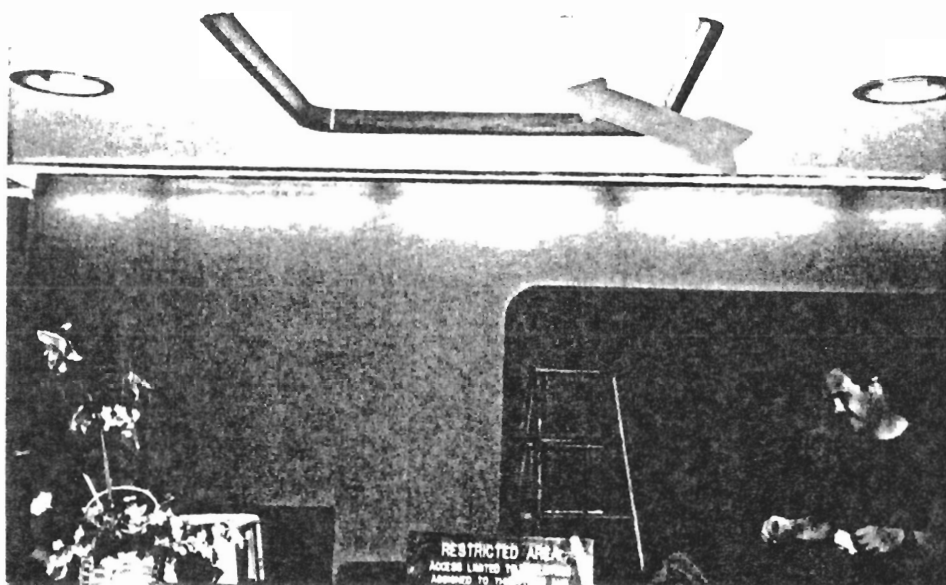
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**ELECTRIC BUILDING**

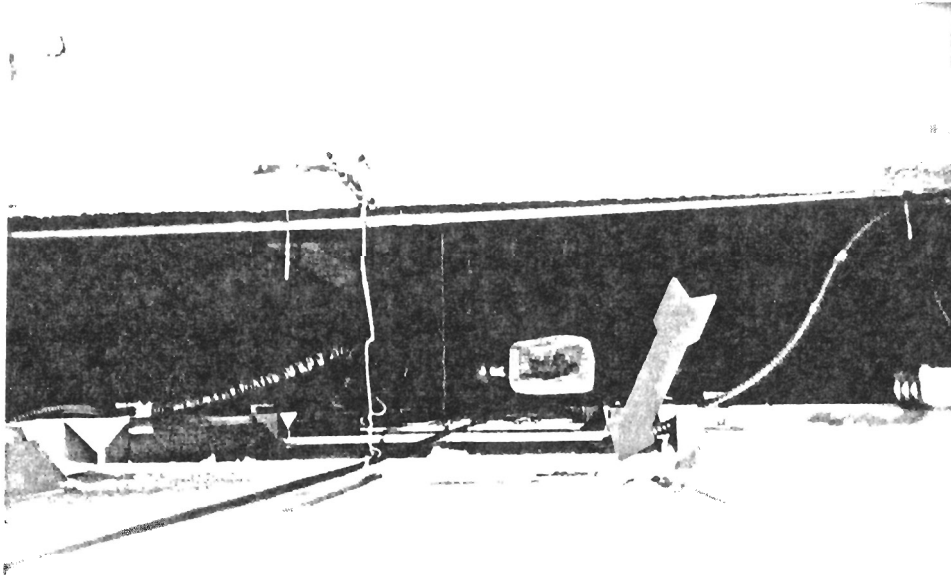


**#9. 19TH FLOOR FIREPROOFING**

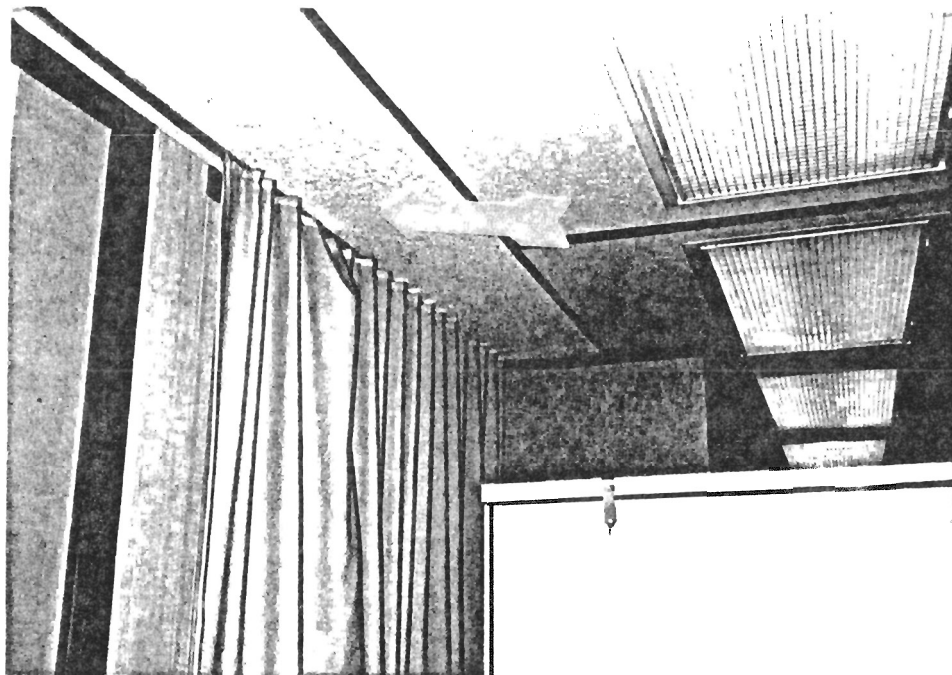


**#10. 19TH FLOOR LIGHT WELL CEILING ACOUSTIC**

**ELECTRIC BUILDING**

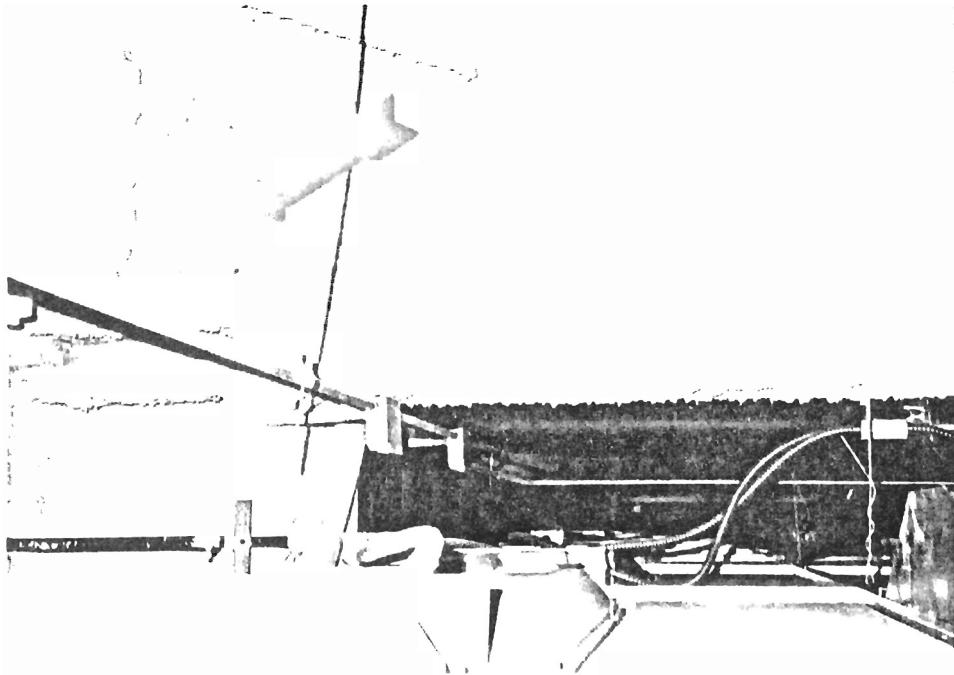


**#15. 17TH FLOOR FIREPROOFING IN AIR PLENUM (DEBRIS)**

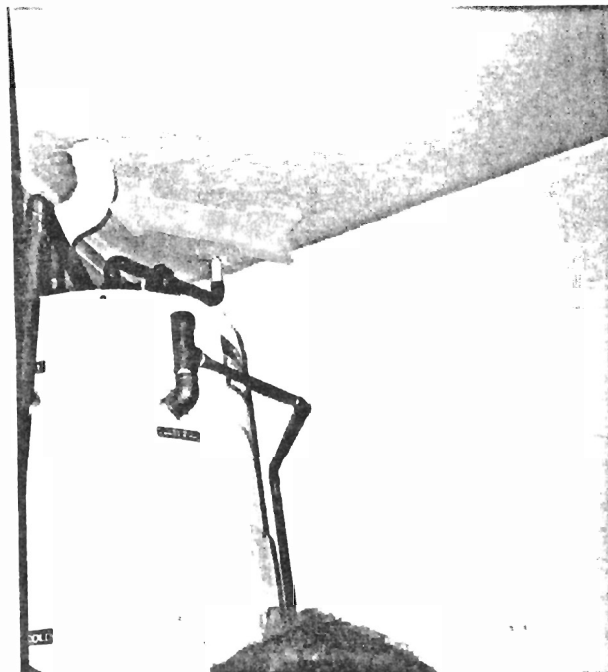


**#16. 17TH FLOOR PERIMETER CEILING ACOUSTIC**

**ELECTRIC BUILDING**



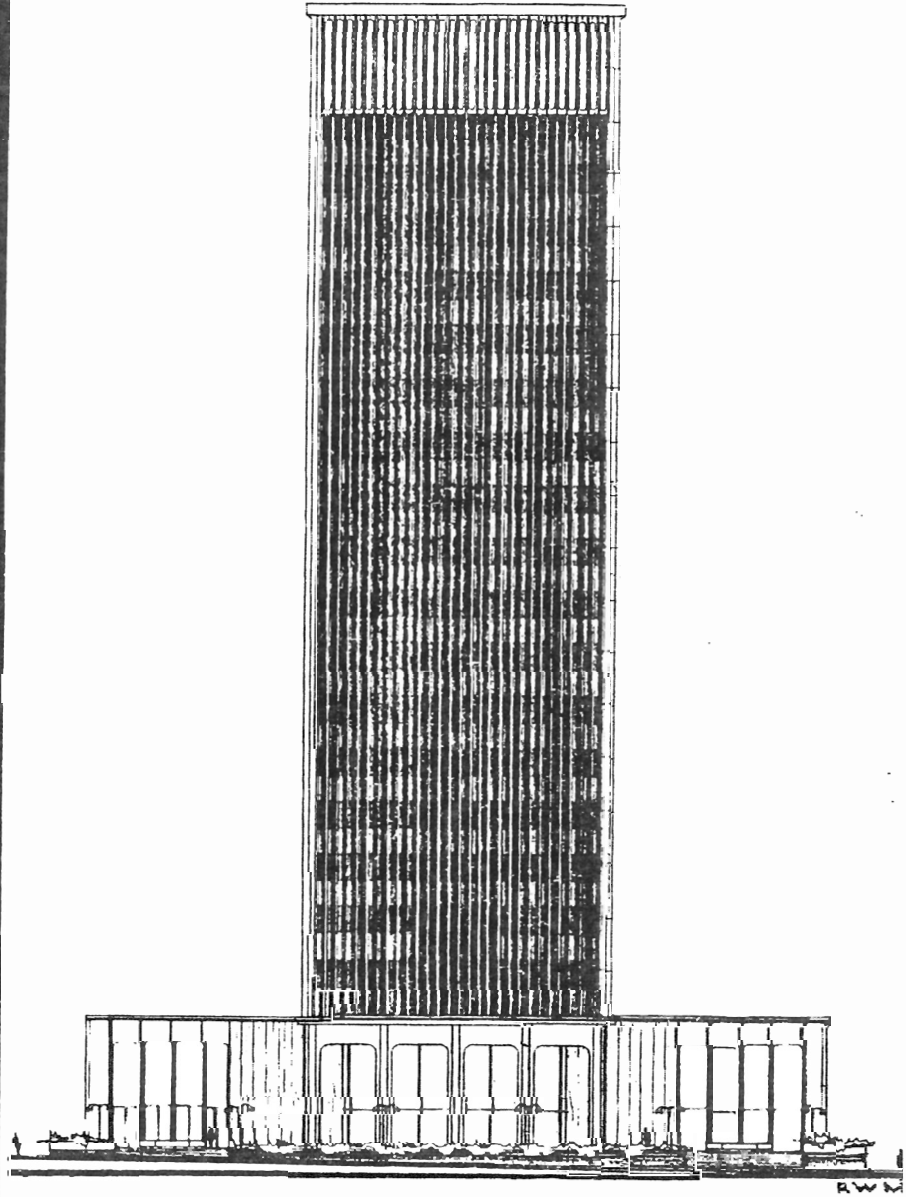
**#19. 15TH FLOOR AIR PLENUM FIREPROOFING**



**#20. 15TH FLOOR JANITOR CLOSET FITTINGS**

## **EXHIBIT “C”**

# SPECIFICATIONS



RICHARD GEORGE WHEELER AIA AND ASSOCIATES  
PLANNING ARCHITECTURE ENGINEERING

2276 ROSSCROSS BLVD.



SAN DIEGO GAS & ELECTRIC COMPANY  
CORPORATE OFFICE BUILDING

DOCUMENTS FOR

BUILDING CONSTRUCTION

of

CORPORATE OFFICE BUILDING  
SAN DIEGO GAS & ELECTRIC COMPANY  
SAN DIEGO, CALIFORNIA

Owners

Prepared by

RICHARD GEORGE WHEELER, AIA,  
& ASSOCIATES

Planning, Architecture, Engineering

Architects

Table of Contents

BIDDING REQUIREMENTS

CONTRACT FORMS

GENERAL CONDITIONS

SPECIFICATIONS

DRAWINGS

Architect's  
Job No. 5189

Date: 1 August 1966

SECTION 9C

SPRAY-ON FIREPROOFING

1. GENERAL REQUIREMENTS

- a. General Conditions and Special Conditions are a part of this Section.
- b. Work in this Section (see Special Conditions Section 1A, Article 1): Provide Spray-On Fireproofing work, as shown and specified, complete, including, but not limited to:
  1. Preparatory work;
  2. Spray-on (or trowel-on) fireproofing of structural steel framing and metal decking;
    - a. See drawings for specific fire-resistive protection required;
  3. Samples, data;
  4. Protective measures, clean-up.
- c. Work in other Sections (see Special Conditions Section 1A, Article 1) includes:
  1. Lath and plaster fireproofing: Sections 9A, 9B;
  2. Cast-in-place concrete fireproofing: Section 3A.

2. SPECIFIC REQUIREMENTS

- a. This Contractor shall be licensed by the manufacturer of the material, and qualified and skilled in this type of application. He shall use materials of this manufacturer with equipment approved by this manufacturer. Installation shall be made in accordance with manufacturer's recommendations. A representative of the manufacturer shall be at the job site at the start of the fireproofing operation.

3. MATERIALS

- a. Fireproofing plaster, mill mixed cementitious material, fire resistant, "Mono-Kote" as manufactured by Zonolite Company.
  1. U.S. Gypsum "Red Top Fire Code Plaster", Gold Bond "Fire-Shield Plaster", are approved.

#### 4. SPECIAL REQUIREMENTS

- a. Thicknesses of fireproofing materials shown on the drawings are for Zonolite "Mono-Kote" only. If other materials are to be used, the Contractor must obtain prior approval from the Building Inspection Department for this project, and must submit copies of reports from the Underwriters' Laboratories, Inc., Design Standards, the thickness to be used, methods of application, and all other required data. Attention is specifically called to the fact that in some locations clearance is at a minimum and additional thickness of fireproofing might cause displacement of other work. Contractor shall assume all responsibility and costs for use displacement.
- b. Submit plant data, protective measure system(s) to be used.

#### 5. PREPARATION, INSPECTION

- a. Deliver materials to job site in factory sealed bags, bearing proper Underwriters' Laboratory, Inc. labels; unlabeled bags will not be permitted on the job site. Labels shall show the following data: Manufacturer and factory address, Underwriters' Laboratory Register mark, fire retardent classification and Underwriters' Laboratory design for which it is produced.
- b. Store material in a dry location, off the ground, and away from any material subject to sweating or other dampness.
- c. Prior to application of fireproofing material, surface shall be cleaned of loose material by brushing with a fiber brush or by application of a pressure air stream. Should excessive scaling exist on the surface, this shall be called to the attention of the Contractor for removal by the Contractor prior to the fireproofing operation.
- d. The installer shall examine all surfaces upon which fireproofing is to be applied and shall report in writing to the Contractor any defects which will affect the application or adhering quality of the fireproofing material. Commencement of fireproofing work shall be deemed as acceptance by the installer of the surfaces to be covered, and responsibility for later corrective measures or replacement with acceptable work (at no increased cost to the Owner).

#### 6. APPLICATION

- a. Mixing of materials shall be by machine mixer free of particles of previously mixed material and mixer shall be of a size to provide adequate mixed material to the sprayer. While mixer is in continuous operation, water shall be placed in the mixer and the "Mono-Kote" added secondly. The mixing time shall not be less than 3 minutes for each batch. Wet density of the mixed material as it comes from the mixer shall be approximately 51 pounds per c. f. , using the amount of water as recommended by the manufacturer for their material.
- b. Fireproofing material shall be applied to thicknesses noted.



- c. Fireproofing material shall be applied by a spray machine designed for this use. For 1 inch thick application, material shall be applied in a two coat operation, each coat approximately 1/2 inch thick. Second coat shall be applied approximately 10 minutes after the first coat to allow for initial set of the first coat. For thickness over 1 inch, make the additional application about 4 hours after the initial 1 inch has been applied.
- d. Fireproof coating on beams shall be left rough as applied by the spray nozzle. Trowel surfacing of applied fireproofing on columns to a smooth but not slick surface.
- e. Spot checks for thickness of applied fireproofing may be made by the Architect at such time and places selected by him but prior to move off of fireproofing installer. Such holes or cut-outs shall be plugged by the fireproofing installer at no additional cost. Where fireproofing has not been applied in the required thickness, the Architect may require either additional material to bring the thickness to that required, or shall require removal of all installed materials and re-installation of material to required thickness. All such additional work, including removal of debris from site shall be done at no additional expense to the Owner or his representative.
- f. The requirements of temperature, weather, and ventilation of the Vermiculite Institute standards for Vermiculite plastering shall apply to this work.

#### 7. CLEAN-UP, GUARANTEE

- a. The Contractor shall provide the Architect with an affidavit certifying that the materials used, the application, and the thickness of the applied fireproofing provide the specified fire resistance.
- b. Fireproofing installer shall at all times apply his material so as not to damage, permanently or temporarily, adjacent property, either of the Owner, Contractor, other sub-contractors or the public.
- c. This sub-Contractor shall be responsible for, and shall furnish evidence of insurance coverage for correction of damage to public or private property resulting from work of this Section, and shall promptly repair such damage.
- d. At the completion of his work, include any necessary remedial work, fireproofing installer shall remove all his equipment and all debris caused by his operation from the building and the site.

SECTION 9C

SPRAY-ON FIREPROOFING

1. GENERAL REQUIREMENTS

- a. General Conditions and Special Conditions are a part of this Section.
- b. Work in this Section (see Special Conditions Section 1A, Article 1): Provide Spray-On Fireproofing work, as shown and specified, complete, including, but not limited to:
  - 1. Preparatory work;
  - 2. Spray-on (or trowel-on) fireproofing of structural steel framing and metal decking;
    - a. See drawings for specific fire-resistive protection required;
  - 3. Samples, data;
  - 4. Protective measures, clean-up.
- c. Work in other Sections (see Special Conditions Section 1A, Article 1) includes
  - 1. Lath and plaster fireproofing: Sections 9A, 9B;
  - 2. Cast-in-place concrete fireproofing: Section 3A.

2. SPECIFIC REQUIREMENTS

- a. This Contractor shall be licensed by the manufacturer of the material, and qualified and skilled in this type of application. He shall use materials of this manufacturer with equipment approved by this manufacturer. Installation shall be made in accordance with manufacturer's recommendations. A representative of the manufacturer shall be at the job site at the start of the fireproofing operation.

3. MATERIALS

- a. Fireproofing plaster, mill mixed cementitious material, fire resistant, "Mono-Kote" as manufactured by Zonolite Company.
  - 1. U.S. Gypsum "Red Top Fire Code Plaster", Gold Bond "Fire-Shield Plaster", are approved.

#### 4. SPECIAL REQUIREMENTS

- a. Thicknesses of fireproofing materials shown on the drawings are for Zonolite "Mono-Kote" only. If other materials are to be used, the Contractor must obtain prior approval from the Building Inspection Department for this project, and must submit copies of reports from the Underwriters' Laboratories, Inc., Design Standards, the thickness to be used, methods of application, and all other required data. Attention is specifically called to the fact that in some locations clearance is at a minimum and additional thickness of fireproofing might cause displacement of other work. Contractor shall assume all responsibility and costs for use displacement.
- b. Submit plant data, protective measure system(s) to be used.

#### 5. PREPARATION, INSPECTION

- a. Deliver materials to job site in factory sealed bags, bearing proper Underwriters' Laboratory, Inc. labels; unlabeled bags will not be permitted on the job site. Labels shall show the following data: Manufacturer and factory address, Underwriters' Laboratory Register mark, fire retardent classification and Underwriters' Laboratory design for which it is produced.
- b. Store material in a dry location, off the ground, and away from any material subject to sweating or other dampness.
- c. Prior to application of fireproofing material, surface shall be cleaned of loose material by brushing with a fiber brush or by application of a pressure air stream. Should excessive scaling exist on the surface, this shall be called to the attention of the Contractor for removal by the Contractor prior to the fireproofing operation.
- d. The installer shall examine all surfaces upon which fireproofing is to be applied and shall report in writing to the Contractor any defects which will affect the application or adhering quality of the fireproofing material. Commencement of fireproofing work shall be deemed as acceptance by the installer of the surfaces to be covered, and responsibility for later corrective measures or replacement with acceptable work (at no increased cost to the Owner).

#### 6. APPLICATION

- a. Mixing of materials shall be by machine mixer free of particles of previously mixed material and mixer shall be of a size to provide adequate mixed material to the sprayer. While mixer is in continuous operation, water shall be placed in the mixer and the "Mono-Kote" added secondly. The mixing time shall not be less than 3 minutes for each batch. Wet density of the mixed material as it comes from the mixer shall be approximately 51 pounds per c. f., using the amount of water as recommended by the manufacturer for their material.
- b. Fireproofing material shall be applied to thicknesses noted.

- c. Fireproofing material shall be applied by a spray machine designed for this use. For 1 inch thick application, material shall be applied in a two coat operation, each coat approximately 1/2 inch thick. Second coat shall be applied approximately 10 minutes after the first coat to allow for initial set of the first coat. For thickness over 1 inch, make the additional application about 4 hours after the initial 1 inch has been applied.
  - d. Fireproof coating on beams shall be left rough as applied by the spray nozzle. Trowel surfacing of applied fireproofing on columns to a smooth but not slick surface.
  - e. Spot checks for thickness of applied fireproofing may be made by the Architect at such time and places selected by him but prior to move off of fireproofing installer. Such holes or cut-outs shall be plugged by the fireproofing installer at no additional cost. Where fireproofing has not been applied in the required thickness, the Architect may require either additional material to bring the thickness to that required, or shall require removal of all installed materials and re-installation of material to required thickness. All such additional work, including removal of debris from site shall be done at no additional expense to the Owner or his representative.
  - f. The requirements of temperature, weather, and ventilation of the Vermiculite Institute standards for Vermiculite plastering shall apply to this work.
  - g. Spray-on fireproofing at floor header ducts, as shown on E/26, shall be 1 inch thick minimum, extending 3 inches minimum each side of duct (call for clarification drawing from Architect).
7. CLEAN-UP, GUARANTEE
- a. The Contractor shall provide the Architect with an affidavit certifying that the materials used, the application, and the thickness of the applied fireproofing provide the specified fire resistance.
  - b. Fireproofing installer shall at all times apply his material so as not to damage, permanently or temporarily, adjacent property, either of the Owner, Contractor, other sub-contractors or the public.
  - c. This sub-Contractor shall be responsible for, and shall furnish evidence of insurance coverage for correction of damage to public or private property resulting from work of this Section, and shall promptly repair such damage.
  - d. At the completion of his work, include any necessary remedial work, fireproofing installer shall remove all his equipment and all debris caused by his operation from the building and the site.

## **EXHIBIT “D”**

Bulletin  
No.

Description

Date  
IssuedDate  
SubmittedC.O.  
No.C.O.  
Date

Status

Authorized  
By:

1	Stanray - Structural Redesign	8/24/66	10/14/66	1	5/29/67	Complete	
2	Robertson - Decking Redesign	11/ 2/66	12/ 6/66	N/C	5/31/67	Complete	
3	Addition of Micro-Wave Duct	12/ 5/66	12/ 6/66	5	9/29/67	Complete	
4	3" to 4" conduit change	12/29/66	12/27/66	10	1/ 4/67	Proceed	Change Order
5	Well No. 1	12/29/66	2/ 10/67	2	6/12/67	Complete	
6	Relocate Beams @ Escalator	12/29/66	2/10/67	9	-----	Complete	
7	Misc. Structural Details	12/29/66	2/10/67	-	5/31/67	Complete	RGW 3/13/67
8	Misc. Changes	1/17/67	2/10/67	5	5/31/67	Proceed	Change Order
9	Floor & Roof Drains	1/27/67	2/21/67	5	5/31/67	Proceed	Change Order
10	Floor opening reinforcement	1/30/67	2/21/67	5	5/31/67	Proceed	Change Order
11	Increase 1st floor beam depth	2/ 3/67	2/21/67	5	5/31/67	Complete	
12	Misc. Plumbing changes	2/ 3/67	3/ 8/67	5	5/31/67	Complete	
13	Cancelled (same as 12)	----	----	-	----	Proceed	Change Order
14	Credit for Power Center No. 20	2/ 8/67	3/27/67	8	6/12/67	Complete	
15	Revise Hardware Schedule	3/ 1/67	4/26/67		-----	Proceed	*RGW 10/18/67
16	Future Floodlight Wiring	3/ 7/67	4/ 7/67	10	9/29/67	Proceed	Change Order
17	Well No. 2	----	2/22/67	7	6/12/67	Complete	
18	3rd Floor Air Cond. Duct	3/27/67	4/27/67	-	-----	Proceed	*RGW 10/18/67
19	Elevator Key Controls - 18th & 19th	----	3/23/67	11	9/29/67	Proceed	Change Order
20	Move Elev. Wall @ Electrical Rooms	3/27/67	4/26/67	11	9/29/67	Proceed	C.V.E. 6/15/67
21	Sidewalk Planters	3/27/67	4/ 7/67	5	5/31/67	Proceed	Change Order
22	1st, 2nd, 3rd flr. partition changes	4/14/67	6/18/67	-	-----	Proceed	MHGCC
22 R	Revision to No. 22	5/19/67	6/18/67	-	-----	Proceed	RGW
23	8th floor partition changes	5/15/67	9/ 6/67	-	-----	Proceed	MHGCC
24	Tenant partitions	5/15/67	8/15/67	-	-----	Proceed	RGW 9/21/67
25	Ash St. lobby window mullions	4/11/67	5/ 2/67	9	6/12/67	Proceed	Change Order
26	Reinforcing steel change	4/26/67	5/ 8/67	5	5/31/67	Complete	
27	3rd floor plaster ceiling	5/ 1/67	6/ 8/67	-	-----	Proceed	*RGW 10/18/67
28	Steel decking changes	5/ 1/67	7/23/67	11	9/29/67	Proceed	Change Order
29	Control console changes	5/ 1/67	6/ 2/67	-	-----	Proceed	
30	Relocate telephone entrance	5/11/67	6/ 5/67	11	9/29/67	Proceed	Change Order
31	Control Room Changes (1st floor)	5/25/67	6/18/67	11	9/29/67	Proceed	Change Order
32	South stage revisions	8/28/67	-----	-	-----	Proceed	RGW 10/4/67
33	Structural revisions to 20th floor	5/26/67	7/ 3/67	11	9/29/67	Proceed	Change Order
34	E.F. Brady Voluntary Alternates	----	9/15/66	3	5/29/67	Proceed	Change Order

\* Verbal

No.	Description	Issued	Submitted	No.	Date	Status	Change Order
35	Additional outlets @ typical floors	5/26/67	7/28/67	11	9/29/67	Proceed	Change Order
36	Night depository - relocate	5/26/67	-----	-	-----	Hold	MHGCC
37	Structural @ electrical equip. rms.	6/ 2/67	8/ 2/67	10	9/29/67	Complete	Change Order
38	Fan coil motor voltage	-----	8/24/67	10	9/29/67	Proceed	Change Order
39	Structural sleeves	6/21/67	7/26/67	-	-----	Complete	Change Order
40	Add outlets - 1st & 2nd floors	6/22/67	8/17/67	11	9/29/67	Proceed	Change Order
41	3rd floor kitchen - coffee urn	6/26/67	8/24/67	-	-----	-----	Change Order
42	Finish Schedule	7/ 3/67	8/17/67	Cancelled		-----	RGW 10/3/67
43	3rd floor partitions	7/ 3/67	8/17/67	11	9/29/67	Proceed	Change Order
44	Structural - Ramp B to A Level	7/13/67	8/16/67	-	-----	-----	Change Order
45	Typical Restroom lighting.	7/16/67	8/17/67	-	-----	-----	-----
46	Terrazzo treads @ Stair No. 3	7/18/67	8/ 7/67	-	-----	-----	-----
47	Transformer room doors	7/20/67	8/17/67	-	-----	Proceed	MHGCC
48	Hardware change	7/24/67	8/ 1/67	11	9/29/67	Proceed	Change Order
49	Lobby Tile pattern	7/27/67	8/22/67	11	9/29/67	Proceed	Change Order
50	12th & 13th flr. supply ducts	8/ 7/67	6/22/67	-	-----	Proceed	MHGCC
51	18th floor partition	9/12/67	-----	-	-----	Proceed	RGW 10/4/67
52	-----	-----	-----	-----	-----	-----	-----
53	Elevator indicator panel	-----	7/25/67	10	9/29/67	Proceed	Change Order
54	2 ea. "J" Boxes	-----	7/ 5/67	10	9/29/67	Proceed	Change Order
55	Parapet bolts	8/23/67	8/28/67	-	-----	Proceed	RGW
56	Fountain circuits	-----	4/ 4/67	10	9/29/67	Proceed	Change Order
57	Cool white to white tubes	6/20/67	7/14/67	10	9/29/67	Proceed	Change Order
58	Feeder size change	3/ 1/67	3/ 9/67	10	9/29/67	Proceed	Change Order
59	Omit drapery track	8/24/67	Cancelled		-----	-----	RGW 9/19/67
60	-----	-----	-----	-----	-----	-----	-----
61	Condensate drains	4/10/67	5/ 9/67	-	-----	Proceed	RGW 9/7/67
62	Concrete roof plugs	8/28/67	-----	-	-----	Proceed	MHGCC
63	Finish Schedule	9/ 1/67	-----	-----	-----	-----	-----
64	19th floor	-----	-----	-----	-----	-----	-----
65	Addition to control system	9/ 7/67	9/25/67	-----	-----	-----	-----
66	-----	-----	-----	-----	-----	-----	-----
67	10 to 20 mil. waterproofing	9/14/67	10/12/67	-----	-----	-----	-----
68	Facing on duct	9/21/67	10/17/67	-----	-----	-----	-----
69	Waterproofing @ Dishwashing rm.	9/25/67	-----	-----	-----	-----	-----
70	Lights @ North cornice, 3rd floor	10/12/67	-----	-----	-----	-----	-----
71	Omit art work	10/ 9/67	-----	-----	-----	-----	-----

H o l d

Bulletin No.	Description	Date Issued	Date Submitted	Status	Authorized By:
72	Lights @ E & W cornice, 3rd floor	10/12/67			
73	-----				
74	White concrete @ parapet	10/17/67		Proceed	Bulletin
C.O. Request					
K	Clarification Drawing E-7	4/25/67	4/26/67	Proceed	
P	C.V.E. - sleeves	5/ 5/67	5/12/67	Complete	
Q	Hanging wires - 12th & 13th floors	6/15/67	6/14/67	Complete	
R	Well No. 3	----	9/16/67	Complete	
S	Clarification Drawing No. 24	7/ 5/67	8/16/67	Proceed	
T	Change D to D-2 Fixtures	----	7/10/67	Proceeding	
X	Add to 18th & 19th Header Duct	----	7/26/67	Complete	
Z	Additional 3 sleeves	----	8/ 7/67	Complete	
AA	Typical floor exit lights	8/10/67	8/10/67	Proceed	
BB	Janitor room finish	8/ 4/67	8/17/67	Proceeding	
CC	Fan coil grill change	----	8/15/67	H o l d	
DD	Omit flood light covers	----	9/ 7/67	Omitted	
EE	4th floor holes	----	9/22/67	Proceed	
FF	5th, 6th & 7th floor holes	----	10/16/67	Proceed	
GG	Change B-23 door frame	----	10/ 3/67	Complete	